ABSTRACT

The present invention includes an integration unit (11) that integrates a primary angular frequency applied based on an angular velocity command, and that computes a phase, a power converting unit (14) that applies three phase voltages to a rotating machine (1) according to three phase voltage commands, a current detecting unit (15) that detects three phase currents carried to the rotating machine, a coordinate converting unit (13) that conducts a coordinate conversion of converting the currents detected by the current detecting unit into currents on a rotation two-axis coordinate based on the phase output from the integration unit (11), and of converting voltage commands on the rotation two-axis coordinates into the three phase voltage commands, and a voltage command computing unit (12) that computes the voltage commands on the rotation two-axis coordinate based on the primary angular frequency and the current on the rotation two-axis coordinate. The voltage command computing unit (12) computes the voltage commands on the rotation two-axis coordinate based on absolute values of respective axis current components on the rotation two-axis coordinate. It is therefore possible to make a current transient response when a load torque increases coincide with a current transient response when the load torque decreases as long as the load torque is at an equal operating point.